

**TRANSCIVER TRAINER, DEVICE 8D27****TRAINING CATEGORY:**

COMMUNICATIONS (Radio)

ORIGINATING AGENCY:

DCNO/AIR

SECURITY CLASSIFICATION:

Device 8D27 is unclassified.

INTENDED USE:

To provide student instruction in the basic theory, operation, adjustment and troubleshooting methods associated with electronic circuits normally utilized in modern AM, FM and CW transmitters and receivers.

FUNCTIONAL DESCRIPTION:

Device 8D27 reflects present state-of-the-art transceiver concepts utilizing transistor circuitry representative of conventional circuits and switching incorporated in high performance

commercial AM-CM transceivers. The trainer consists of a transmitter section, receiver section, sharing bilateral circuitry common to both transmitter and receiver functions, control panel and power supply completely self-contained in a single chassis without equipment, cabinet or enclosure. The transceiver shall normally operate in the receiver mode, sensitive to incoming signals, when electrical power is applied, and shall be capable of transfer to the transmitter mode, overriding the receiver function, when the push-to-transmit switch or the microphone switch is activated. Upon push to the OFF position of the push-to-transmit switch or release of the microphone switch, the transceiver shall return to the receiver mode.

The trainer was designed for classroom use and will operate in the 25-35 MHz spectrum.

The power output will be limited to 1.5 watt \pm 0.5 watt into a 50/52 ohms dummy load. The dummy load is provided as a component of the transmitter section.

DIRECTORY OF NAVAL TRAINING DEVICES

Provisions have been made for the placement of at least three (3) malfunctions on each printed circuit board by the insertion of removable faulty or improper component parts for theory as well as learning methods of troubleshooting.

PHYSICAL INFORMATION:

Size: 26" x 26" x 18"
Weight: Approximately 35 lbs.

EQUIPMENT REQUIRED (NOT SUPPLIED):

Typical standard test equipment used to checkout, test and calibrate operational equipment are listed below. The equipment or its equivalent will be utilized with the trainer to support the training objectives:

- (a) Multimeter, Simpson Type 260 or equal
- (b) VT Voltmeter, RCA Type WV77E or equal
- (c) Oscilloscope, Type OS-8/U or
Type AN/USM 117 or equal
- (d) Signal Generator, Type AN/URM-25
or equal
- (e) Signal Generator, Type TS-382 or equal
- (f) VT Voltmeter, Type AN/USM-116
- (g) Output Meters, Type TS-585 or equal

POWER REQUIREMENTS:

115-VAC, 1-phase, 3-wire, 60 Hz.
An 8' 3-wire power cord with plug is provided with the trainer.

PERSONNEL:

Instructors/Operators: Instructor and
Student Operated

CONTRACT IDENTIFICATION:

Manufactured by Scientific Controls, Inc.,
Croyden, PA under NAVTRASYSCEN Contract No.
N61339-71-C-0196.

LOCAL STOCK NUMBER:

6910-LL-C00-1665